CALFED Bay-Delta Program
GEOGRAPHIC SCOPE for PROBLEMS and SOLUTIONS
January 17, 1996

Introduction

The appropriate scope of analysis and action for the CALFED Bay-Delta Program (**Program**) is a crucial program element that required the early attention of the Program Team and the Bay-Delta Advisory Council (BDAC). A conceptual version of the more comprehensive "geographic scope" presented in the following sections was first introduced at the BDAC meeting held on June 29, 1995. The following form has evolved through the discussions and modifications provided at three public workshops and an equal number of BDAC meetings. This level of public review was solicited because the Program Team believes that an appropriate geographic and issue scope is essential to the success of the program. A scope that is too narrow, while expedient, may result in issues not being addressed in a comprehensive fashion. A scope that is too large may result in an overly complex planning process causing difficulty in developing implementable solutions.

The approach which has evolved through both technical and public forum discussions is a tiered geographic scope focusing on the Bay-Delta system for purposes of problem definition, while allowing solution generation from a much broader area. The specifics of the geographic scope which has been adopted by the CALFED Bay-Delta Program are presented in the following narrative.

Geographic and Issue Scope for Problems

The geographic scope for the CALFED Bay-Delta Program will consist of the legally defined Delta, Suisun Bay (extending to the Carquinez Strait) and Suisun Marsh. For purposes of this discussion paper this geographic area will be called the "Bay-Delta System" or the "Bay-Delta."

The program proposes to address problems which are manifest in or closely linked to the Suisun Bay/Suisun Marsh and Delta area. However, the scope of possible solutions to these problems may encompass any action which can be implemented by the CALFED agencies or can be influenced by them to address the identified problems, regardless of whether its implementation takes place within the Delta/Suisun Bay/Suisun Marsh area (see figure 1).

Any problem currently associated with (1) the management and control of water or (2) the beneficial use of water within the Bay-Delta[1] (including both environmental and economic uses)

[1]The California Code of Regulations, Title 23, Sections 660 - 674, lists a number of beneficial uses of water in California. Beneficial uses which are relevant to the identification of Delta problems are: Domestic Uses; Irrigation Uses; Municipal Use; Industrial Use; Fish and Wildlife Preservation and Enhancement Use; Aquaculture Use; Recreational Use; Water Quality Use; and Heat Control Use.

is within the purview of the CALFED Bay-Delta Program provided that at least part of the problem is manifested within the Bay-Delta or is directly associated with conditions within the Bay- Delta. This general definition can be further illustrated by two general (and overlapping) perspectives: (1) the Bay-Delta as a region in its own right; and (2) the Bay-Delta as one piece of a complex and interconnected water/biological system. Examining each perspective in turn:

> The Bay-Delta as a region in its own right. Viewed without reference to the outside world, the Bay-Delta has numerous characteristics, and many of the problems associated with these characteristics fall under the aegis of the Program. For example, the problems associated with fish and wildlife habitat, providing flood protection for land use/farming, providing for continuing recreation, protecting resident fish, plant and wildlife species, protecting In-Delta municipal and industrial water uses, and protecting Delta infrastructure are all manifested within the Bay-Delta and therefore are part of the problem scope.

> The Bay-Delta as one piece of an interconnected water/biological system. Many things, from water and water quality constituents on to fish and birds, move across the boundaries of the Bay-Delta, whether into the Bay-Delta, out of the Bay-Delta, or across the Bay-Delta. Problems which are identified with these various "inputs" and "outputs" fall under the aegis of the Program, provided that at least part of each problem is manifested in the Bay-Delta or is directly associated with conditions within the Bay-Delta.

During the BDAC and Public review period this approach to problem scope raised some issues relating to the specific treatment of problems associated with San Francisco Bay. These issues revolve around whether the Program will address (1) interactions between the Delta and San Francisco Bay such as flow or sediment and (2) export and diversion service area water management (e.g., water conservation). As explained earlier, the program will address such problems with respect to San Francisco Bay, by examining the "inputs" and "outputs," from the Bay-Delta problem area. Thus, under the adopted approach "outputs" such as flow or sediments needed to protect the rest of the Bay are within the scope of the Program. However, problems which originate outside the problem area such as toxic discharges into the South Bay are not. With respect to water management, the output of water from the problem area through diversions has been identified as a problem. Consequently, part of the solution to that problem may be changes in the way water is managed (i.e. demand management, alternative supply development, etc.).

Further examples of Bay-Delta inputs and outputs which are either manifested in, or directly associated with the Bay-Delta and which may trigger the identification of a problem within the purview of the Program include:

INPUTS	OUTPUTS
Inflow patterns	Delta outflow patterns
Toxic inflows	Toxic outflows
Salinity inflows	Salinity outflows
Nutrient inflows	Nutrient outflow
In-migrating fish	Out-migrating fish
In-migrating birds	Out-migrating birds
Temperature inflows	Temperature outflows
	Water diversion patterns
	Water quality constituents in diversions
	Entrainment of biota in diversions

The following examples of problems which would be outside the purview of the CALFED Bay-Delta Program because they fail to qualify as either manifest in, or directly associated with the Bay-Delta may help further clarify the adopted definition:

- Problems caused by discharges from wastewater treatment plants in the South Bay.
- Land subsidence in the Central Valley.
- Populations of fish in reservoirs outside the Bay-Delta.

Geographic and Issue Scope for Solutions

In contrast to the PROBLEM SCOPE, which excludes problems not manifested within or directly associated with the Bay-Delta, the SOLUTION SCOPE is quite broad, potentially including any action which could help solve identified problems. Thus, the geographical scope for solutions may expand to include at least the Central Valley watershed, the Southern California water system service area, and the portions of the Pacific Ocean out to the Farallone Islands.

An expanded solution scope is necessary because many problems related to the Bay-Delta are caused by factors outside the Bay-Delta. Moreover, an expanded solution scope is desirable from a planning point of view because more benefits may be generated at lower cost if solutions are not limited to the geographic Bay-Delta. For example, the problem of salmon populations is linked to the Bay-Delta because of high salmon mortality during salmon migrations. However, the broader problem of salmon populations goes far beyond the Bay-Delta. One solution action might be to reduce salmon mortality during salmon migration through the Bay-Delta. However, it might be less expensive or ecologically preferable to combine that action with an effort to promote greater salmon production upstream.

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Similarly, if water-borne organic carbon generated within the Bay-Delta is deemed to be a problem because it may form carcinogens during water treatment processes, one solution action might be to reduce the production of organic carbon within the Bay-Delta or to shift the diversion point. Alternatively, water exporters may be able to improve water quality in a more cost-effective or ecologically preferable manner through new treatment technologies or a combination of those two actions.

Solution Priorities

The Program cannot fully solve every problem within its purview. Therefore, the Program will assign priorities to various problems and give highest priority to problems (as defined above) which are acute, of broad concern, closely related to the Delta as a region or as an element in an interconnected water/biological system, and which have solutions which are implementable by the CALFED agencies. Other problems will receive lower priority.

For example, the Bay-Delta is an ecological zone of major importance and a major element in an interconnected biological system (e.g., it is a migration corridor). Therefore, the problem of the Bay-Delta's environmental health, including inputs to and outputs from the Bay-Delta, will receive high priority. Similarly, the Bay-Delta is a key element in the water supply system and consequently, problems with unsatisfactory water diversion patterns (volume and quality) will also receive high priority.

Dealing with the Impacts of Possible Solutions

The Program is charged with developing solutions to a number of identified Bay-Delta problems. Each possible solution to Bay-Delta problems, in turn, may have additional impacts, both within and outside the Bay-Delta (whether positive or negative). The Program will analyze carefully the possible negative impacts of various Bay-Delta solutions as part of the environmental review process and will take those impacts into consideration in the development of viable alternatives. Where impacts remain, the Program will develop mitigation measures as required by the environmental review process. A key solution principle which will be followed is that solution alternatives cannot create significant negative redirected impacts. That is, when the benefits and impacts of the solution alternatives are examined in their entirety the balance must be positive for all of the interests depending upon the Bay-Delta system resources.

Integration with Other Processes

The CALFED Bay-Delta Program is not operating in isolation. Numerous other programs already exist to address some of the problems and solutions within the purview of the Program, particularly in the upstream areas. The Program will assess the degree to which existing processes are successfully dealing with problems from the perspective of the Program. Where existing processes are adequate, the Program may establish a linkage between the existing process and the proposed solution alternatives. Where existing processes are inadequate because

of lack of funding or other institutional constraints, the Program may need to include recommendations to improve existing processes, include new actions in its various alternatives, or mobilize the CALFED agencies to advance the existing processes. In this way, the CALFED Bay-Delta Program will provide a framework that facilitates the coordination of new and existing programs so as to achieve a comprehensive and lasting solution.

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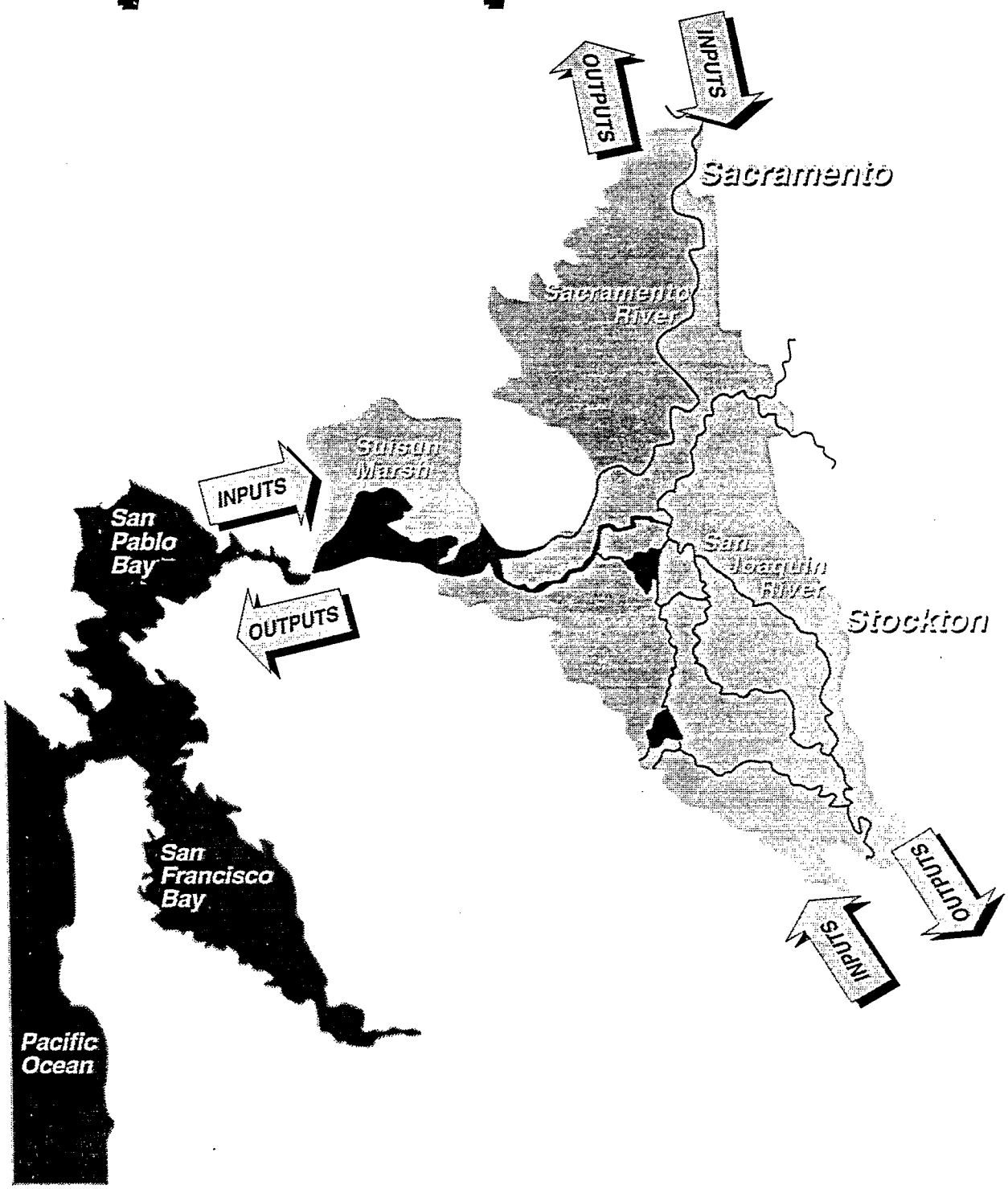
Figure 1

Problem Area Inputs/Outputs



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